foam supplies, inc.

HOME OFFICE 4387 North Rider Trail Earth City, Missouri 63045-1103
Tel: 314-344-3330 1-800-325-4875 Fax: 314-344-3331

DALLAS OFFICE 590 Benjamin s Way Lewisville, Texas 75057
Tel: 972-436-7009 1-800-752-FOAM Fax: 972-436-0243

Mr. John Seitz
United States Environmental Protection Agency
OAQPS
Mail Code (C539-02)
Research Triangle Park, NC 2771

Dear Mr. Seitz,

This document is a petition to the EPA to grant VOC Exempt status the methyl formate on the basis of negligible reactivity. This product should qualify for exempt status on the basis of scientific documentation. Exempt status is further supported from the positive effects on commercial, economic and environmental aspects.

SCIENTIFIC DOCUMENTATION

Emissions

The VOC standard is based on the reactivity of ethane with hydroxyl radicals, and it is measured as a Rate Constant/cm^3/mole/sec. Methyl formate was tested in three separate studies measuring its rate constant with hydroxyl radicals and compared to ethane measured in a like manner. Methyl formate showed results 58-68% better than ethane when measured by weight. Methyl formate exhibited 15-35% improvement over ethane when measured by molecular weight. By either standard, methyl formate is considerably better than ethane.
The two charts below represent these issues graphically.

VOC	Reference	Method	Rate Constant in $cm^3/mole^{-1}/sec^{-1}$
Methyl Formate	Good et al	Experimental	1.068×10^{11}
Methyl Formate	LeCalve et al	Experimental	1.044×10^{11}
Methyl Formate		Experimental	1.368×10^{11}
		Experimental	1.611×10^{11}

Good, David A.; Hanson, Jaron; Francisco, Joseph S., Li, Zhuangjie; Jeong, Gill-Ran. **Kinetics and Reaction Mechanism of Hydroxyl Radical Reaction with Methyl Formate.** J. Phys. Chem. A (1999), 103 (50), 10893-10898

LeCalve, S.; Le Bras, G.; Melloki, A. **Kinetics for the OH reaction with oxygenated VOCs.** Proc. EUROTRAC Symp. '98: Transp. Chem. Transform. Troposphere (1999), 112-115

Wallington, Timothy J.; Dagaut, Philippe; Liu, Renzhang; Kurylo, Michael J. **Gas-phase reactions of hydroxyl radicals with a series of esters over the temperature range 240-440K.** Int. J. chem. Kinet. (1988, 20(2), 177-86

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FACSIMILE COVER SHEET

TO: DAVID SANDERS

FROM: TIM KALINOWSKI

DATE: FEB. 15, 2002

RE:

FAX #: 919-541-0824

Number of pages to follow: 1

Additional Comments: DAVID,

HERE'S THE CHANGE YOU REQUESTED. I'D APPRECIATE IT IF YOU COULD KEEP ME INFORMED AS TO OUR PROGRESS.

THANKS,

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